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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/797,419	03/10/2004	Rolf Ruckdeschel	TRW(AS)7031	4126
26294	7590	05/03/2006	EXAMINER	
TAROLLI, SUNDHEIM, COVELL & TUMMINO L.L.P. 1300 EAST NINTH STREET, SUITE 1700 CLEVEVLAND, OH 44114			WEBB, TIFFANY LOUISE	
			ART UNIT	PAPER NUMBER
			3616	

DATE MAILED: 05/03/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/797,419

Applicant(s)

RUCKDESCHEL ET AL.

Examiner

Tiffany L. Webb

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 19 July 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-6 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-6 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 10 March 2004 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 5/3/04, 7/19/04.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Priority

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Drawings

2. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the hollow cylindrical shaped fuel elements must be shown or the feature(s) canceled from the claim(s). The claims identify these as reference character 32, but 32 references fuel tablets, not what is being described in claim 5. No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner,

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the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 1-6 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 1, line 2, "a cord-type fuel line" is unclear to what properties of "cord" are encompassed by the fuel line. The examiner suggests clarifying what is meant.

In claim 4, line 3, "in a fill" is unclear to the scope. It is unclear from the specification what "a fill" means in this claim.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claims 1-4 are rejected under 35 U.S.C. 102(b) as being anticipated by Nakajima et al. (US 5,743,559). Nakajima discloses having an inflation device comprising a first pyrotechnic gas generator (16) having a cord-type fuel line (13) and an igniter (4) associated with the fuel line, and a second pyrotechnic gas generator (8) having a

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housing (9) and fuel elements (15) arranged in the housing, wherein the cord-type fuel line (13) passes through the housing of the second pyrotechnic gas generator and wherein the cord-type fuel line within said housing is adapted to release combustion products for igniting the fuel elements of the second gas generator. Regarding claim 2, Nakajima et al. discloses having the first pyrotechnic gas generator having a housing (5) with overflow openings (7), and wherein the housing (5) of the first pyrotechnic gas generator with the overflow openings (7) passes through the housing of the second pyrotechnic gas generator. Regarding claim 3, Nakajima et al. discloses having a housing (5) adjoining the housing (9) of the second pyrotechnic gas generator, and wherein the fuel line passing through the housing of the second gas generator being directly in contact with the fuel elements (see Figure 1). Regarding claim 4, Nakajima et al. discloses having fuel elements (15) that are fuel tablets which are arranged in the second housing.

7. Claims 1-6 rejected under 35 U.S.C. 102(b) as being anticipated by Paxton et al. (US 4,998,751). Paxton et al. discloses having an inflation device comprising a first pyrotechnic gas generator (30) having a "cord-type" fuel line (46), as broadly interpreted from "cord-type," the broadest reasonable interpretation includes, a fuse, which combusts and as such can be considered fuel, and an igniter (36) associated with the fuel line, and a second pyrotechnic gas generator (78) having a housing (12) and fuel elements (96 and 120) arranged in the housing, wherein the cord-type fuel line passes through the housing of the second pyrotechnic gas generator and wherein the cord-type fuel line within said housing is adapted to release combustion products for igniting the

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fuel elements of the second gas generator (see Figure 2). Regarding claim 2, Paxton et al. discloses having the first pyrotechnic gas generator having a housing (30a) with overflow openings (74), and wherein the housing of the first pyrotechnic gas generator with the overflow openings (74) passes through the housing of the second pyrotechnic gas generator. Regarding claim 3, Paxton et al. discloses having a housing (30a) adjoining the housing (12) of the second pyrotechnic gas generator, and wherein the fuel line passing through the housing of the second gas generator being directly in contact with the fuel elements (see Figure 2). Regarding claim 4, Paxton et al. discloses having fuel elements (96) that are fuel tablets which are arranged in the second housing. Regarding claim 5, Paxton et al. discloses having hollow cylindrical shaped fuel elements (120), also known as wafers, surrounding the fuel line and within the housing of the second pyrotechnic gas generator (see Figure 2). Regarding claim 6, Paxton et al. discloses the fuel elements having a higher combustion rate than the fuel line (see col. 9, lines 1-31).

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. Claims 1-6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Paxton et al. in view of Herrmann (WO 01/08937). Paxton et al. discloses having an inflation device comprising a first pyrotechnic gas generator (30) having an igniter (36)

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associated with the fuel line, and a second pyrotechnic gas generator (78) having a housing (12) and fuel elements (96 and 120) arranged in the housing, wherein the cord-type fuel line passes through the housing of the second pyrotechnic gas generator and wherein the cord-type fuel line within said housing is adapted to release combustion products for igniting the fuel elements of the second gas generator (see Figure 2). Using a narrower interpretation of "cord-type fuel line," if this limitation is considered to preclude a simple fuse, Paxton et al. fails to disclose having a cord-type fuel line used in the gas generator. Herrmann, however, discloses using a cord-type gas generator comprising a solid propellant strand in inflators. It would have been obvious to one of ordinary skill in the art at the time of the invention to have put the cord-type generator of Herrmann in the gas generator system of Paxton et al. in view of the teachings to use this generator to help increase the rate of combustion. Regarding claim 2, Paxton et al. discloses having the first pyrotechnic gas generator having a housing (30a) with overflow openings (74), and wherein the housing of the first pyrotechnic gas generator with the overflow openings (74) passes through the housing of the second pyrotechnic gas generator. Regarding claim 3, Paxton et al. discloses having a housing (30a) adjoining the housing (12) of the second pyrotechnic gas generator, and wherein the fuel line passing through the housing of the second gas generator being directly in contact with the fuel elements (see Figure 2). Regarding claim 4, Paxton et al. discloses having fuel elements (96) that are fuel tablets which are arranged in the second housing. Regarding claim 5, Paxton et al. discloses having hollow cylindrical shaped fuel elements (120), also known as wafers, surrounding the fuel line and within the

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housing of the second pyrotechnic gas generator (see Figure 2). Regarding claim 6, Paxton et al. discloses the fuel elements having a higher combustion rate than the fuel line (see col. 9, lines 1-31).

Conclusion

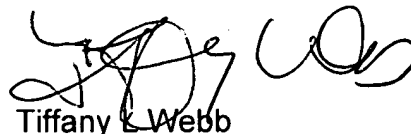
10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The following are all gas generators: Cunningham (US 4,950,458), Vockensperger et al. (US 4,805,534), Zharkov et al. (US 6,817,298), Hock (US 5,398,966), and Dietrich (US 4,690,060).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tiffany L. Webb whose telephone number is 571-272-2797. The examiner can normally be reached on 8-4:30 M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Paul Dickson can be reached on 571-272-6669. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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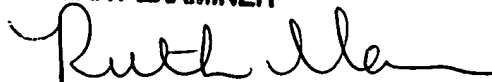
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Tiffany L Webb
Examiner
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tlw

**RUTH ILAN
PRIMARY EXAMINER**



5/28/06